1914

SI
Me-1, Payette
Volume, Growth & Yield
of Western Yellow Pine

## DETAIL OF METHODS OF WORK

Lengths A 20-foot steel diameter tape, graduated on one side in feet and tenths of feet was used in measuring lengths.

D. B. H. 48-inch calipers were used to obtain this important measurement. Where it was necessary to use a diameter tape, this fact is indicated on the sheet. Where a defective butt necessitated a measurement elsewhere than exactly 4½ feet above the ground (average) the height at which measured and the reason are given.

D.i.b, D.o.b, Bark. It was usually impossible to measure directly the D.i.b. of a section, because the snow made it impossible for one man to break out the log. Where it could be done, the D.i.b. was secured with a steel rule or tape.

Generally, the D.o.b. was measured by calipers, two measurements being taken at right angles to each other and averaged.

The bark measurement was averaged from two readings on opposite sides of the bole, where free from the influence of limbs, etc.

The D.i.b. is then the difference between the D.o.b. and twice the bark. This procedure gives more nearly accurate results than the practice of removing the bark on two opposite faces of the bole, and calipering to get the D.i.b. The danger here is in the liability not to get the barkless faces exactly opposite each other and thus include some bark in the D.i.b. measurement, especially in large trees. Further, but one diameter measurement per log is practicable, which is insufficient in boles as often irregular in cross-section as the yellow pine.

Crotch In case of a crotch, the major branch was measured and used to compute the "total," "merchantable" and "used" lengths; the minor branch only being measured to include in the total scale of the tree.

Stump Height Is the average of two measurements from the stump's top surface to the slope line, taken on the up-hill and the down-hill sides with a tape.

Stump D.i.b. Is the average of the longest diameter and the diameter at right angles thereto, measuring with a steel tape. Due allowance was made for abnormalities such as fire scars and root swellings.

Stump Bark -- The average of two or more measurements with a steel rule on opposite sides of the stump.

Sapwood -- The width was determined where possible by taking one-half the difference between the total D.i.b. and the diameter of the heartwood.

Stump Analysis Was in accord with general practice. Counted in, measured out along the average radius. This was determined by taking one-half the average D.i.b. as determined by the above method, and laying it off on the stump, where it will cross the rings at right angles as much as possible, and avoid abnormalities.

## Interpretation of Terms

Total Height is the distance from the ground to the tip of the major branch or main bole.

Merchantable Length is the distance from the top of the tree to the height of a stump 18" high, on the average.
No account was taken of rot or crook, the idea being that the volume table would not take into account defects, but would be based on actual volume. Defects would be provided for by the application of a"cull per cent" in working up estimates.

Top is that portion of the tree above the point in the bole where the D.i.b. measures 8". Eight inches was taken to mean 7.8" to 8.2", depending on the roughness of the bole, but approximating 8.0".

Used Length is the aggregate length of the material actually used. Culled logs and sections shattered in felling are not included, even though the latter might have been saved by careful fallers.

Clear Length was taken to mean the length of the bole above an 18" stump which would produce 50% clear lumber, as nearly as could be determined by the absence of limbs and knot swellings.

Pruned Length was not computed, but can be determined from data under "Remarks", where the presence of green limbs is noted where they first occur on the bole.

Limbs Small limbs are indicated where they average less than 3" d.o.b. near their base.

Medium limbs average between 3" and 5" inclusive, d.o.b. near their base.

Large limbs are those over 5" d.o.b. near their base.

Limbs were noted only from the view-point of their effect on the lumber from the tree.

Age of Section 1, the stump, is the age at stump height, the age achieved by the seedling in reaching stump height not being included.

If any of the interpretations or methods used in this work on this Forest are not in accord with general practice in District 4, please so inform us.

Respectfully submitted,

Lee Miles
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Approved Dec. 31, 1914

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